

**REPORT OF ACTIVITIES
OF THE
DEPARTMENT OF WATER RESOURCES**

by

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HYDROLOGY AND FLOOD OPERATIONS OFFICE

Water Conditions during August

As of September 1, Water Year 2007 statewide hydrologic conditions were as follows: precipitation, 65 percent of average to date; runoff, 50 percent of average to date; and reservoir storage, 85 percent of average for the date. On April 1, the statewide snowpack was about 40 percent of the April 1 average (the usual date of maximum accumulation). This is the smallest snowpack for April 1 since 1988 when the statewide snowpack was at 30 percent of the April 1 average. On May 1, 2007, the statewide snowpack was only about 25 percent of normal due to below-normal snowfall and above-normal temperatures during April. Usually, snowmelt continues well into June, but by June 1 of this water year, the statewide snowpack was essentially gone.

In general, seasonal precipitation during this water year has been below average, especially in Southern California. On August 31, the Northern Sierra 8-Station Index had a seasonal total of 36.5", which is about 74 percent of the seasonal average to date and about 73 percent of average for an entire Water Year (50.0"). During Water Year 2007, the Northern Sierra 8-Station Index had the sixth driest January and March on record. (In contrast, the other large precipitation months of December and February were above normal at 101 percent and 170 percent of average, respectively.) The Water Year 2007 October through July seasonal total of 36.5" is the 26th driest year out of 88 years of record. In both Northern and Southern California, fire season began early because of the dryness.

As of June 5, 2007, the date of the last forecast for this Water Year, the projected median April-July unimpaired snowmelt runoff for the State's major water supply basins ranged from 56 percent (Shasta Lake Inflow) to 22 percent (Tule River). Sacramento River unimpaired runoff observed through August 31, 2007 was about 9.9 million acre-feet (MAF), which is about 55 percent of average. (On August 31, 2006, the observed Sacramento River unimpaired runoff through that date was about 31.5 MAF or about 173 percent of average.) The median forecasts of the Sacramento and San Joaquin Valley Water Year Type indexes are "Dry" and "Critical," respectively.

Selected Cities Precipitation Accumulation as of 09/01/2007 (National Weather Service Water Year: July through June)					
	Jul 1 to Date 2007 - 2008 (in inches)	% Avg	Jul 1 to Date 2006 - 2007 (in inches)	% Avg	% Avg Jul 1 to Jun 30 2007 - 2008
Eureka	1.05	194	0.04	7	2
Redding	1.15	426	0.04	15	3
Sacramento	0.01	9	0.00	0	0
San Francisco	0.01	10	0.00	0	0
Fresno	0.02	100	0.00	0	0
Bakersfield	0.00	0	0.00	0	0
Los Angeles	0.00	0	0.00	0	0
San Diego	0.00	0	0.05	42	0

Key Reservoir Storage (1,000 AF) as of 09/01/2007								
Reservoir	River	Storage	Avg Storage	% Average	Capacity	% Capacity	Flood Control Encroachment	Total Space Available
Trinity Lake	Trinity	1,554	1,839	85	2,448	63	---	894
Shasta Lake	Sacramento	2,134	2,966	72	4,552	47	-2,418	2,418
Lake Oroville	Feather	1,823	2,377	77	3,538	52	-1,715	1,715
New Bullards Bar Res	Yuba	660	653	101	966	68	-306	306
Folsom Lake	American	376	621	61	977	38	-601	601
New Melones Res	Stanislaus	1,492	1,374	109	2,420	62	-928	928
Don Pedro Res	Tuolumne	1,301	1,427	91	2,030	64	-729	729
Lake McClure	Merced	377	564	67	1,025	37	-647	648
Millerton Lake	San Joaquin	186	230	81	520	36	-334	334
Pine Flat Res	Kings	187	387	48	1,000	19	-813	813
Isabella	Kern	126	212	60	568	22	-308	442
San Luis Res	(Offstream)	477	890	54	2,039	23	---	1,562

The latest National Weather Service Climate Prediction Center (CPC) 90-Day long-range seasonal weather outlook (for September through November), issued August 16, suggests below average precipitation for Southern California and most of Central California. Average rainfall is predicted for the northern portion of the State. Temperatures are expected to be above normal for Eastern California and average for Western California. The latest CPC long-range weather outlook for September, issued August 31, suggests below average precipitation for almost all of the State. Temperatures are expected to be above normal for most of California, except for the North and South Coasts, where average temperatures are suggested. For both the one- and three-month forecasts, temperatures are expected to be well above average for the American Southwest.

Delta Emergency Response

The Department of Water Resources (DWR) has two primary work activities related to enhancing DWR's ability to respond to a large-scale levee failure in the Delta:

Emergency Operations Plan

Started in January 2007, the development of a Delta-specific Emergency Operations Plan (EOP) for the DWR has been led by the Division of Flood Management's (DFM) Hydrology and Flood Operations Office with support from URS under the DRMS contract. An Interim Emergency Operations Plan (EOP) has been completed, but the next phase of establishing a formal EOP will require extensive public outreach efforts, which are being coordinated this month. DWR plans to complete the EOP by the end of next year.

Pre-Event Preparation Work

Started in May 2007, the pre-event preparation work includes all the short-term physical enhancements (such as stockpiling additional materials and initiating new emergency repair contracts) that will improve DWR's immediate response to Delta levee failures. Pre-deployment of rock will commence this Budget Year, other materials and actions will be pursued next fiscal year.

- Access to several sites (Rio Vista, Hood, and Port of Stockton) is currently being negotiated and negotiations are expected to be completed by October 30.
- California Environmental Quality Act documentation (negative declaration) should be filed by October 1.
- A plan for public outreach is currently being prepared and public meetings are expected to commence in late September or early October.
- Purchase of a rock conveyor to be situated in a Port of Stockton facility is expected to be completed by January 31.
- The delivery of rock to be stockpiled for use in emergencies should begin on January 2 and be complete by February 28.

FLOOD MAINTENANCE OFFICE

Tisdale Bypass Channel Rehabilitation Project

On August 2, 2007, the Notice to Begin Work was signed by the contractor. Mobilization to the site began on August 8 after all the environmental compliance and safety submittals were received. The contractor began by building access ramps and set grades. On August 16, the contractor's field office was established on Reclamation District (RD) 1660 property. Clearing in the Bypass began on August 16 utilizing four Caterpillar 657E scrapers beginning on the downstream end. Since that time, two 657E scrapers were mobilized to the site daily until a total of 16 scrapers were available along with four water trucks. The contractor is currently removing approximately 30,000 cubic yards of sediment daily, working a single 12-hour shift during the week and several 10-hour Saturday shifts. As of September 5, approximately 420,000 cubic yards of sediment have been removed from the bypass and the Contractor is attempting to stay ahead of schedule to complete the project by November 15, 2007.

FLOOD PROJECTS OFFICE

Flood Protection Corridor Program

DWR's Flood Protection Corridor Program is soliciting grant applications for flood risk reduction projects using primarily non-structural methods. The reliance on non-structural solutions is a requirement for this funding established by Proposition 13, and continued under Proposition 84, which is the source for \$24 million in grant funds to be allocated this fiscal year.

Originally initiated under Proposition 13 (the Safe Drinking Water, Clean Water, Water Quality, and Flood Control Bond Act of 2000), the Flood Protection Corridor Program competitively grants funds to local government agencies and non-profit organizations for acquisition, restoration, enhancement, and protection of real property while preserving

sustainable agriculture and enhancing wildlife habitat in and near flood corridors throughout the state. The Flood Protection Corridor Program is continued under Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, and will be accepting applications for grant funding of eligible projects.

Grant funds are available for proposed projects located at least partially in one or more of the following eligible areas:

- Federal Emergency Management Agency (FEMA) designated Special Flood Hazard Area.
- Floodway designated by the Reclamation Board.
- An area that would be inundated if the project were completed and an adjacent FEMA Special Flood Hazard Area were inundated.
- An area below the elevation of the 100-year recurring flood, shown on a locally adopted base flood elevation map (supported by professional hydrologic/hydraulic analyses).

Project proposals are due November 2. There is a grant cap of \$5 million per project. Five pre-submittal workshops will be held throughout California to provide opportunities for applicants to become familiar with application materials and to resolve questions that may arise during the application process.

Early Implementation Projects

DWR has completed the initial eligibility review for seven grant applications received in May 2007 for funding Early Implementation Projects under the State-Federal Flood Control System Modifications Grant Program (EIP Grant Program). Of the seven received, four have passed the initial review and three did not meet the eligibility requirements for this program.

The four projects passing the initial review are indicated below along with the estimated State cost share:

- Levee District No. 1 of Sutter County, Lower Feather River Setback Levee at Star Bend – Total cost: \$20.15 million, Preliminary State cost share: \$16.33 million.
- Reclamation District No. 2103, Bear River North Levee Rehabilitation Project - Total cost: \$14.7 million, Preliminary State cost share: \$7.35 million.
- Sacramento Area Flood Control Agency, Natomas Levee Improvement Program (NLIP) Early Start Program – Total NLIP cost: \$227 million; total cost of Natomas Cross Canal South Levee element of NLIP: \$73.4 million; Preliminary State cost share: \$49.0 million.

- Three Rivers Levee Improvement Authority, Feather River Setback Levee - Total cost: \$201.3 million, Preliminary State cost share: \$138.5 million.

The three projects that did not pass the review are:

- Lake County, Middle Creek Flood Damage Reduction and Ecosystem Restoration Project - Total cost: \$62.20 million, requested amount was \$29.91 million.
- Reclamation District 2035 (Woodland), Conaway Ranch Floodway Corridor Project – Total Cost: \$174.20 million, requested amount was \$2.68 million.
- Sacramento County, Howe Avenue Pump Station Improvements – Total cost: \$10.00 million, requested amount was \$8.92 million.

Applicants with projects passing the initial review must provide additional information specific to their project, including demonstrating their financial capability to carry out the project. Each successful applicant has received a detailed letter informing them of the status of their application and identifying the additional information they need to produce during the next phase of the application process. Once this information is received, DWR will complete its review and make a final determination of eligibility for the project and begin the process of entering into agreements with the successful applicants for funding the State cost share of their project.

The unsuccessful applicants have received letters explaining why they did not meet some of the eligibility criteria for the EIP Grant Program and directing them to other DWR grant programs that may be a better fit for their respective projects.

LEVEE REPAIRS AND FLOODPLAIN MANAGEMENT OFFICE

Levee Evaluations

The newly formed levee evaluations branch was created to perform geotechnical levee evaluations on about 350 miles of urban levee. An urban levee is defined as protecting at least 10,000 people. The geotechnical levee evaluations will focus on the urban project levees in geographic areas of RD 17, Natomas, West Sacramento, Marysville, Woodland, Davis, Stockton, Maintenance Area (MA) 9, the American River, Sacramento, the Sutter Basin, and RD 784. This program will later expand to other areas within the Sacramento and San Joaquin Flood Control Projects with the Bond funding.

The purpose of these evaluations is to assist in developing a levee certification program based on geotechnical data, provide consistent formats for data (and associated data exchange), and provide an evaluation of the levee system based on geotechnical data. This evaluation will be conducted with the goal of providing 200-year level of protection in urban areas and the design profile level of protection in rural areas using the U.S. Army Corps of Engineers (Corps) underseepage criteria.

The following activities occurred during the past month:

1. Due to the lack of a timely state budget, drilling has only occurred with one cone penetrometer rig during August in Sutter County. Drilling will proceed in Natomas, Stockton, West Sacramento, and Marysville later this month. The actual delays to the levee evaluation program schedule are still being assessed.
2. On September 6, 2007, an electro-magnetic survey of the urban levees commenced. This will provide continuous information to augment existing borings and may identify anomalies in the subsurface soils requiring future subsurface explorations.
3. A scope of work for a RFQ (Request for Qualifications) for two \$60M contracts to perform mostly non-urban levee evaluations was advertised on September 7, 2007.
4. Levee evaluations staff are meeting on a regular basis with engineers from RD 17 who wish to develop projects ahead of DWR to address seepage areas.

Status of Erosion Repairs

2005 Ayres Critical Erosion Sites

Work related to on-site environmental mitigation including soil-rock mix and agricultural soil cover, plantings, in-stream woody materials (IWM), fascine bundles, pole cuttings, seeding, and erosion control fabrics, has been completed on 15 DWR sites. The only work remaining on the 2005 Critical Erosion Sites is the installation of willow pole cuttings at four sites. Due to hot weather, installation of willow pole cuttings has been temporarily postponed, and will be completed in October 2007.

2006 Ayres Critical Erosion Sites

Phase II work on the 22 DWR and Corps Critical Erosion Sites (2006) is currently under construction and scheduled for completion by November 2007. The set-back levee designs for two sites on Cache Creek, levee mile (LM) 3.9 and LM 4.2, are complete. Property appraisals for the two sites are also complete, and DWR is negotiating acquisitions with the landowners. The borrow material for construction of two setback levees will come from the City of Woodland Detention Basin and will be stockpiled in a temporary storage area at a nearby City-owned property. DWR is in the process of issuing a contract for excavation and stockpiling materials. Construction of Cache Creek set-back levees before November 2007 is dependent upon the results of negotiations with landowners.

Special Levee Repair Projects

DWR is assisting Glen County with the Hamilton City Sacramento River mile (RM) 200.6 interim repair project. This repair consists of strengthening the levee by

adding fill to the landside slope. There are about 30 to 50 feet of riverbank remaining on the waterside and a Field Action Report completed by URS last year concluded that the existing levee could fail during a high flood event. This special project will be eligible for local cost-shared grant funding.

Field investigations are in progress for two additional sites on the Sacramento River - M&T Phelan Levee (RM 192.5L) and the Fremont Weir Gage (RM 83.9R). The results of these investigations will be finalized by the end of September 2007.

DWR is developing a proposal to conduct a feasibility study to repair/modify the Butte Basin 3B's Overflow structure. This proposal will detail the process needed to determine and evaluate the alternatives for re-establishing the overflow structure to meet the current overflow needs, and will address cost sharing options with the local agencies.

2006 Public Law (PL) 84-99 Rehabilitation Assistance Program

The Corps has initiated design for 62 of the 133 Order 3, 4 and 5 sites selected for repair by the Corps. The Corps has also added six Order 2 sites on the Sacramento River in RD 150 to their PL84-99 repair list. Approximately 20 of the 62 selected sites have permitting issues that will likely prevent them from being constructed this year. For these sites, flood-fighting contingencies will be established and implemented as necessary. DWR is providing environmental permitting, rights-of-way and borrow materials for all PL84-99 sites. DWR is waiting for environmental permits from the regulatory agencies for repairs to an Order 1 site on Butte Creek at Unit 1LM 0.8. The engineering design for this site is under review.

LEGISLATION

Since the Legislative session closed on September 11, 2007, and Division of Flood Management issues were subject to extensive late session negotiations, a summary report discussing what ultimately occurred will be presented at the Board meeting on September 21.